

CLAIM

1. An apparatus for protecting a vehicle operator within a cab of a mobile vehicle working in a polluted environment, the cab sealed from the polluted environment and including a pressure system for maintaining a cab pressure above a threshold pressure and a pressure sensor for generating an alarm signal when the cab pressure drops below the threshold pressure, the apparatus comprising:
 - a timer; and
 - a processor linked to the timer and for, when a first alarm signal is generated, disrupting operation of the vehicle, timing out a disrupt period and, at the end of the disrupt period, returning the vehicle to normal operation.
2. The apparatus of claim 1 wherein, during the disrupt period, the processor monitors the alarm signal and, if the alarm signal ceases, returns the vehicle to normal operation.
3. The apparatus of claim 2 further including a communication device for communicating information to a vehicle operator and a memory device for storing information related to possible causes of cab pressure reduction, the processor linked to the communication device and the memory device and, when an alarm signal is generated, retrieving the information and providing the information to the vehicle operator via the communication device.
4. The apparatus of claim 3 wherein the information also includes a message that vehicle operation will remain disrupted for the duration of one disrupt period unless the cab pressure rises above the threshold pressure.
5. The apparatus of claim 3 wherein the communication device is one of a visual display and an audio transmitter.

6. The apparatus of claim 3 wherein the information includes a list of instructions guiding the vehicle operator to perform various tasks to increase the cab pressure to a point above the threshold pressure.
7. The apparatus of claim 4 wherein the vehicle includes an implement and wherein the processor disrupts by disabling the implement.
8. The apparatus of claim 7 further including a marker system for marking field location and, wherein, the processor causes the marker system to mark location upon disabling the implement.
9. The apparatus of claim 1 further including an audible alarm and wherein the processor disrupts by activating the alarm.
10. The apparatus of claim 1 wherein the processor disrupts by reducing the maximum vehicle speed.
11. The apparatus of claim 1 wherein the vehicle includes an implement and wherein the processor disrupts by disabling the implement.
12. The apparatus of claim 1 further including a communication device for communicating information to a vehicle operator and a memory device for storing information related to possible causes of cab pressure reduction, the processor linked to the communication device and the memory device and, when an alarm signal is generated, the processor also retrieving the instructions and providing the instructions to the vehicle operator via the communication device.
13. The apparatus of claim 12 wherein the communication device is one of an audible device and a visual device.

14. The apparatus of claim 1 further including an indicator and, wherein, when the first alarm signal is generated, the processor activates the indicator and times out a delay period prior to disrupting vehicle operation.

15. The apparatus of claim 14 wherein the indicator is a communication device for communicating information to a vehicle operator and a memory device for storing information related to possible causes of cab pressure reduction, the processor linked to the communication device and the
5 memory device and, when an alarm signal is generated, the processor activating the indicator by retrieving the instructions and providing the instructions to the vehicle operator via the communication device during the delay period and during the disrupt period.

16. An apparatus for protecting a vehicle operator within a cab of a mobile vehicle working in a polluted environment, the cab sealed from the polluted environment and including a pressure system for maintaining a cab pressure above a threshold pressure and a pressure sensor for generating an alarm signal when the cab pressure drops below the threshold pressure, the apparatus comprising:

a communication device for communicating information to the vehicle operator;

a memory device for storing information related to possible causes of cab pressure reduction;

a processor linked to the communication device and the memory device and for, when an alarm signal is generated, retrieving the instructions and providing the instructions to the vehicle operator via the communication device.

17. The method of claim 16 wherein the information includes a list of instructions guiding the cab operator to perform various tasks to increase the cab pressure to a point above the threshold pressure.

18. A method for protecting a vehicle operator within a cab of a mobile vehicle working in a polluted environment, the cab sealed from the polluted environment and including a pressure system for maintaining a cab pressure above a threshold pressure and a pressure sensor for generating an alarm signal when the cab pressure drops below the threshold pressure, the method comprising the steps of:

monitoring the alarm signal; and
when an alarm signal is generated,
starting a timer to time out a disrupt period;
disrupting vehicle operation during the disrupt period; and
at the end of the disrupt period, normalizing vehicle operation.

19. The method of claim 18 wherein, during the disrupt period, the method further includes the steps of monitoring the alarm signal and, if the alarm signal ceases, normalizing vehicle operation.

20. The method of claim 19 further including the steps of providing a communication device for communicating information to a vehicle operator and, when an alarm signal is generated, also providing information related to possible causes of cab pressure reduction to the vehicle operator via the communication device.

21. The method of claim 20 wherein the step of providing a communication device includes providing one of a visual display and an audio transmitter.

22. The method of claim 18 wherein the vehicle includes an implement and wherein the step of disrupting includes disabling the implement.

23. The method of claim 22 wherein the vehicle further includes a marker system for marking field location and, wherein, the step of disabling further includes the step of causing the marker system to mark location upon disabling the implement.

24. The method of claim 18 wherein the step of disrupting includes activating an audible alarm.

25. The method of claim 18 further including the steps of providing an indicator and, wherein, when the first alarm signal is generated, activating the indicator and timing out a delay period prior to the step of disrupting.

26. The method of claim 25 wherein the step of providing an indicator includes the step of providing a communication device for communicating information to a vehicle operator and, when an alarm signal is generated, the step of activating the indicator includes providing information
5 related to possible causes of cab pressure reduction to the vehicle operator via the communication device.

27. An apparatus for protecting a vehicle operator within a cab of a mobile vehicle working in a polluted environment, the cab sealed from the polluted environment, the apparatus comprising:

10 a contaminant sensor for sensing presence of a contaminant in the cab and generating an alarm signal when the sensor senses the presence of a contaminant;

a timer; and

a processor linked to the timer and for, when a first alarm signal is
15 generated, disrupting operation of the vehicle, timing out a disrupt period and, at the end of the disrupt period, returning the vehicle to normal operation.

28. The apparatus of claim 27 wherein, during the disrupt period, the processor monitors the alarm signal and, if the alarm signal ceases, returns the vehicle to normal operation.

29. The apparatus of claim 27 wherein the vehicle includes an implement and wherein the processor disrupts by disabling the implement.

30. The apparatus of claim 27 wherein the processor disrupts by reducing the maximum vehicle speed.

31. The apparatus of claim 27 further including an indicator and, wherein, when the first alarm signal is generated, the processor activates the indicator and times out a delay period prior to disrupting vehicle operation.